Received - 2 October 2024
Planning Applications Group

DATE:	**6 March 2017**
DESIGNER:	**DESIGNS FOR LIGHTING LTD**
PROJECT No:	**400**
PROJECT NAME:	**10506137M-Dartford-Calc-St Clements Way-1-R1**

DESIGNED TO C4, C3 Class 40 mph, 50 mph
Using CU Phosco E3-E4 Major Lanterns

Outdoor Lighting Report

PREPARED BY:

Toby Penter
Senior Lighting Designer
[redacted]
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Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1 - C4	558355.00	174643.00	120.00	280.00	1.50	1.50
2	Grid 2 - C4	558445.00	174342.00	210.00	300.00	1.50	1.50
3	Grid 3 - Redeveloped	558597.00	174143.00	90.00	240.00	1.50	1.50
4	Grid 4 - C4	558548.00	173924.00	150.00	243.00	1.50	1.50
5	Grid 5 - C4	558567.00	173854.00	90.00	120.00	1.50	1.50
6	Grid 6 - C3	558443.00	173523.00	240.00	375.00	1.50	1.50
7	Grid 7 - C3	558329.00	173148.00	240.00	375.00	1.50	1.50
8	Grid 8 - C3	558312.00	172773.00	300.00	375.00	1.50	1.50
9	Grid 9 - C3	558491.14	172728.00	141.00	105.00	1.50	1.50
10	Grid 10 - C4	558468.00	173564.00	36.00	105.00	1.50	1.50
11	Grid 11 - C3	558452.00	173041.00	114.00	195.00	1.50	1.50
12	Grid 12 - C3	558504.00	173501.00	117.00	297.00	1.50	1.50

Luminaires

Luminaire C Data

Supplier	Kent LED Replacement
Type	P863-16-P4-NW-E500-26W
Lamp(s)	740P NW
Lamp Flux (klm)	2.98
File Name	P863-16-P4-NW-E500-26W.ies
Maintenance Factor	0.81
Imax70,80,90(cd/klm)	650.1, 186.8, 0.0
Lamp S/P Ratio	1.64
No. in Project	8

Luminaire F Data

Supplier	Kent LED Replacement
Type	P863-16-P4-NW-E800-42W
Lamp(s)	740P NW
Lamp Flux (klm)	4.50
File Name	P863-16-P4-NW-E800-42W.ies
Maintenance Factor	0.81
Imax70,80,90(cd/klm)	654.4, 173.4, 0.0
Lamp S/P Ratio	1.64
No. in Project	1

Luminaire I Data

Supplier	Kent LED Replacement
Type	P862-64-R2-NW-B750-143W
Lamp(s)	740P NW
Lamp Flux (klm)	16.61
File Name	P862-64-R2-NW-B750-143W.ies
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	599.4, 30.7, 0.0
Lamp S/P Ratio	1.64
No. in Project	26

Luminaire P Data

Supplier	Kent LED Replacement
Type	P863-32-R3-NW-E400-41W
Lamp(s)	740P NW
Lamp Flux (klm)	5.08
File Name	P863-32-R3-NW-E400-41W.ies
Maintenance Factor	0.88
Imax70,80,90(cd/klm)	822.4, 25.3, 0.0
Lamp S/P Ratio	1.64
No. in Project	24

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Luminaires

Luminaire Q Data

Supplier	Kent LED Replacement
Type	P863-32-R3-NW-E500-51W
Lamp(s)	740P NW
Lamp Flux (klm)	6.18
File Name	P863-32-R3-NW-E500-51W.ies
Maintenance Factor	0.88
Imax70,80,90(cd/klm)	838.3, 23.9, 0.0
Lamp S/P Ratio	1.64
No. in Project	2

Luminaire R Data

Supplier	Kent LED Replacement
Type	P863-32-R3-NW-E600-60W
Lamp(s)	740P NW
Lamp Flux (klm)	7.29
File Name	P863-32-R3-NW-E600-60W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	839.9, 23.9, 0.0
Lamp S/P Ratio	1.64
No. in Project	3

Luminaire S Data

Supplier	Kent LED Replacement
Type	P863-32-R3-NW-E700-69W
Lamp(s)	740P NW
Lamp Flux (klm)	8.37
File Name	P863-32-R3-NW-E700-69W.ies
Maintenance Factor	0.86
Imax70,80,90(cd/klm)	841.7, 23.8, 0.0
Lamp S/P Ratio	1.64
No. in Project	29

Luminaire T Data

Supplier	Kent LED Replacement
Type	P863-32-R3-NW-E800-78W
Lamp(s)	740P NW
Lamp Flux (klm)	9.34
File Name	P863-32-R3-NW-E800-78W.ies
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	844.8, 23.8, 0.0
Lamp S/P Ratio	1.64
No. in Project	13

Luminaire U Data

Supplier	Kent LED Replacement
Type	P863-32-C2-NW-E500-51W
Lamp(s)	740P NW
Lamp Flux (klm)	6.35
File Name	P863-32-C2-NW-E500-51W.ies
Maintenance Factor	0.88
Imax70,80,90(cd/klm)	236.6, 20.8, 0.0
Lamp S/P Ratio	1.64
No. in Project	8

Luminaire Y Data

Supplier	Kent LED Replacement
Type	P863-32-C2-NW-E900-87W
Lamp(s)	740P NW
Lamp Flux (klm)	10.59
File Name	P863-32-C2-NW-E900-87W.ies
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	234.0, 20.6, 0.0
Lamp S/P Ratio	1.64
No. in Project	4

Luminaire Z Data

Supplier	Kent LED Replacement
Type	P863-32-C2-NW-E1000-95W
Lamp(s)	740P NW
Lamp Flux (klm)	11.57
File Name	P863-32-C2-NW-E1000-95W.ies
Maintenance Factor	0.80
Imax70,80,90(cd/klm)	232.6, 20.5, 0.0

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	U	558442.85	174669.14	10.00	222.00	5.00	0.00	1.47			
2	U	558442.85	174669.14	10.00	41.00	5.00	0.00	1.47			
3	P	558426.36	174692.29	10.00	216.00	5.00	0.00	1.47			
4	P	558426.36	174692.29	10.00	31.00	5.00	0.00	1.47			
5	P	558412.20	174716.71	10.00	208.00	5.00	0.00	1.47			
6	P	558412.20	174716.71	10.00	23.00	5.00	0.00	1.47			
7	P	558398.88	174748.32	10.00	202.00	5.00	0.00	1.47			
8	P	558398.88	174748.32	10.00	16.00	5.00	0.00	1.47			
9	P	558390.42	174773.69	10.00	195.00	5.00	0.00	1.47			
10	P	558390.42	174773.69	10.00	13.00	5.00	0.00	1.47			
11	P	558384.61	174802.44	10.00	191.00	5.00	0.00	1.47			
12	P	558384.61	174802.44	10.00	9.00	5.00	0.00	1.47			
13	P	558382.81	174834.32	10.00	186.00	5.00	0.00	1.47			
14	P	558382.81	174834.32	10.00	3.00	5.00	0.00	1.47			
15	P	558383.66	174864.71	10.00	174.00	5.00	0.00	1.47			
16	P	558383.66	174864.71	10.00	358.00	5.00	0.00	1.47			
17	U	558389.16	174896.21	10.00	168.00	5.00	0.00	1.47			
18	U	558389.16	174896.21	10.00	345.00	5.00	0.00	1.47			
19	S	558512.09	174596.74	12.00	215.00	5.00	0.00	0.47			
20	S	558486.93	174579.92	12.00	39.00	5.00	0.00	0.47			
21	S	558531.34	174573.80	12.00	222.00	5.00	0.00	0.47			
22	S	558509.66	174549.96	12.00	34.00	5.00	0.00	0.47			
23	S	558551.84	174538.97	12.00	213.00	5.00	0.00	0.47			
24	S	558528.05	174521.63	12.00	34.00	5.00	0.00	0.47			
25	S	558568.23	174513.65	12.00	205.00	5.00	0.00	0.47			
26	S	558544.54	174491.29	12.00	27.00	5.00	0.00	0.47			
27	S	558583.87	174483.31	12.00	212.00	5.00	0.00	0.47			
28	S	558561.03	174460.00	12.00	29.00	5.00	0.00	0.47			
29	S	558605.44	174439.76	12.00	205.00	5.00	0.00	0.47			
30	S	558577.52	174427.44	12.00	20.00	5.00	0.00	0.47			
31	S	558619.81	174407.84	12.00	204.00	5.00	0.00	0.47			
32	S	558593.59	174391.92	12.00	27.00	5.00	0.00	0.47			
33	S	558636.52	174368.94	12.00	207.00	5.00	0.00	0.47			
34	S	558607.97	174355.56	12.00	19.00	5.00	0.00	0.47			
	S	558677.11	174159.21	12.00	181.000	5.00	0.00	0.47			
36	S	558645.60	174154.51	12.00	359.00	5.00	0.00	0.47			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
37	S	558677.32	174110.80	12.00	176.00	5.00	0.00	0.47			
38	S	558642.44	174108.89	12.00	353.00	5.00	0.00	0.47			
39	S	558668.12	174064.39	12.00	168.00	5.00	0.00	0.47			
40	S	558635.24	174063.49	12.00	349.00	5.00	0.00	0.47			
41	S	558655.75	174015.39	12.00	156.00	5.00	0.00	0.47			
42	S	558626.15	174024.38	12.00	347.00	5.00	0.00	0.47			
43	S	558645.40	173984.97	12.00	160.00	5.00	0.00	0.47			
44	S	558617.27	173994.89	12.00	340.00	5.00	0.00	0.47			
45	S	558635.66	173960.42	12.00	160.00	5.00	0.00	0.47			
46	S	558600.36	173968.67	12.00	331.00	5.00	0.00	0.47			
47	P	558643.05	173927.28	12.00	201.00	5.00	0.00	0.47			
48	P	558646.22	173900.86	12.00	158.00	5.00	0.00	0.47			
49	P	558633.12	173880.88	12.00	127.00	5.00	0.00	0.47			
50	P	558599.30	173876.33	12.00	79.00	5.00	0.00	0.47			
51	P	558578.58	173891.60	12.00	41.00	5.00	0.00	0.47			
52	P	558573.29	173916.87	12.00	351.00	5.00	0.00	0.47			
53	P	558576.47	173930.61	12.00	289.00	5.00	0.00	0.47			
54	S	558579.21	173947.47	12.00	311.00	5.00	0.00	0.47			
55	P	558595.38	173947.79	12.00	324.00	5.00	0.00	0.47			
56	P	558613.04	173947.63	12.00	264.00	5.00	0.00	0.47			
57	Z	558610.91	173859.36	12.00	147.00	5.00	0.00	0.47			
58	Z	558583.43	173869.51	12.00	0.00	5.00	0.00	0.47			
59	Z	558596.55	173831.13	12.00	153.00	5.00	0.00	0.47			
60	Z	558572.45	173841.70	12.00	0.00	5.00	0.00	0.47			
61	Z	558578.58	173797.94	12.00	153.00	5.00	0.00	0.47			
62	Z	558557.85	173809.89	12.00	339.00	5.00	0.00	0.47			
63	Z	558565.47	173766.44	12.00	156.00	5.00	0.00	0.47			
64	Z	558546.86	173786.63	12.00	333.00	5.00	0.00	0.47			
65	Z	558548.45	173724.94	12.00	165.00	5.00	0.00	0.47			
66	Z	558526.35	173739.17	12.00	342.00	5.00	0.00	0.47			
67	Z	558537.46	173685.41	12.00	167.00	5.00	0.00	0.47			
68	Z	558517.05	173702.49	12.00	344.00	5.00	0.00	0.47			
69	Z	558530.59	173656.60	12.00	169.00	5.00	0.00	0.47			
70	Z	558508.39	173666.54	12.00	345.00	5.00	0.00	0.47			
71	Z	558523.71	173617.33	12.00	162.00	5.00	0.00	0.47			
72	Z	558500.88	173621.77	12.00	353.00	5.00	0.00	0.47			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
73	Z	558515.68	173572.88	12.00	172.00	5.00	0.00	0.47			
74	R	558482.81	173581.13	12.00	0.00	5.00	0.00	0.47			
75	I	558557.65	173626.05	0.00	158.00	5.00	0.00	0.47			
76	Z	558479.00	173545.30	12.00	0.00	5.00	0.00	0.47			
77	Z	558511.66	173539.00	12.00	172.00	5.00	0.00	0.47			
78	I	558475.19	173504.49	12.00	0.00	5.00	0.00	0.47			
79	I	558542.32	173587.95	0.00	157.00	5.00	0.00	0.47			
80	I	558470.54	173467.50	12.00	0.00	5.00	0.00	0.47			
81	I	558531.22	173552.80	0.00	163.00	5.00	0.00	0.47			
82	I	558465.89	173428.49	12.00	0.00	5.00	0.00	0.47			
83	I	558516.84	173498.05	12.00	164.00	5.00	0.00	0.47			
84	I	558461.87	173393.50	12.00	0.00	5.00	0.00	0.47			
85	I	558507.75	173462.42	12.00	172.00	5.00	0.00	0.47			
86	I	558457.33	173360.36	12.00	0.00	5.00	0.00	0.47			
87	I	558501.62	173423.73	12.00	172.00	5.00	0.00	0.47			
88	I	558451.41	173318.29	12.00	350.00	5.00	0.00	0.47			
89	I	558495.49	173388.21	12.00	170.00	5.00	0.00	0.47			
90	I	558443.80	173274.31	12.00	350.00	5.00	0.00	0.47			
91	I	558490.53	173354.44	12.00	162.00	5.00	0.00	0.47			
92	I	558483.97	173311.52	12.00	168.00	5.00	0.00	0.47			
93	Y	558455.95	173159.91	12.00	5.00	5.00	0.00	0.47			
94	I	558476.78	173269.24	12.00	173.00	5.00	0.00	0.47			
95	I	558472.97	173229.39	12.00	179.00	5.00	0.00	0.47			
96	Y	558461.35	173124.21	12.00	14.00	5.00	0.00	0.47			
97	Y	558466.53	173098.23	12.00	9.00	5.00	0.00	0.47			
98	C	558492.53	173087.25	12.00	228.00	5.00	0.00	0.47			
99	C	558480.48	173068.75	5.00	38.00	5.00	0.00	0.40			
100	C	558501.10	173078.16	5.00	223.00	5.00	0.00	0.40			
101	C	558510.82	173071.13	5.00	231.00	5.00	0.00	0.40			
102	C	558521.18	173064.47	5.00	228.00	5.00	0.00	0.40			
103	C	558531.64	173058.44	5.00	242.00	5.00	0.00	0.40			
104	C	558543.06	173052.95	5.00	245.00	5.00	0.00	0.40			
105	C	558555.07	173047.24	5.00	240.00	5.00	0.00	0.40			
106	I	558429.53	173191.89	12.00	354.00	5.00	0.00	0.47			
107	[illegible]	558455.11	173193.79	12.00	962175.000	1	5.00	0.00	0.77		
108	Y	558455.11	173193.79	12.00	356.00	5.00	0.00	0.77			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
109	I	558420.34	173138.37	12.00	357.00	5.00	0.00	0.47			
110	I	558444.44	173135.20	12.00	172.00	5.00	0.00	0.47			
111	Z	558414.84	173102.85	12.00	351.00	5.00	0.00	0.47			
112	Z	558438.52	173099.05	12.00	174.00	5.00	0.00	0.47			
113	Z	558409.77	173007.50	12.00	1.00	5.00	0.00	0.47			
114	Z	558434.08	173051.53	12.00	177.00	5.00	0.00	0.47			
115	Z	558415.47	172969.40	12.00	11.00	5.00	0.00	0.47			
116	Z	558435.14	173008.14	12.00	183.00	5.00	0.00	0.47			
117	Z	558423.72	172933.62	12.00	14.00	5.00	0.00	0.47			
118	Z	558438.94	172973.79	12.00	190.00	5.00	0.00	0.47			
119	Z	558436.41	172895.98	12.00	19.00	5.00	0.00	0.47			
120	Z	558459.24	172905.81	12.00	202.00	5.00	0.00	0.47			
121	Z	558452.26	172861.31	12.00	27.00	5.00	0.00	0.47			
122	Z	558474.89	172872.83	12.00	209.00	5.00	0.00	0.47			
123	Z	558474.46	172824.31	12.00	32.00	5.00	0.00	0.47			
124	Z	558495.61	172839.95	12.00	219.00	5.00	0.00	0.47			
125	T	558498.03	172792.81	12.00	38.00	5.00	0.00	0.47			
126	T	558517.79	172813.64	12.00	225.00	5.00	0.00	0.47			
127	F	558509.34	172773.73	5.00	36.00	5.00	0.00	0.40			
128	T	558540.73	172807.29	12.00	305.00	5.00	0.00	0.47			
129	T	558561.72	172813.79	12.00	267.00	5.00	0.00	0.47			
130	T	558582.45	172810.76	12.00	239.00	5.00	0.00	0.47			
131	T	558595.87	172792.74	12.00	208.00	5.00	0.00	0.47			
132	T	558598.72	172766.63	8.00	172.00	5.00	0.00	0.47			
133	T	558584.76	172747.08	12.00	128.00	5.00	0.00	0.47			
134	T	558568.27	172739.47	12.00	108.00	5.00	0.00	0.47			
135	T	558546.92	172741.38	12.00	61.00	5.00	0.00	0.47			
136	T	558528.74	172756.02	8.00	324.00	5.00	0.00	0.72			
137	T	558526.73	172788.47	12.00	338.00	5.00	0.00	0.47			
138	U	558467.38	174602.29	12.00	32.00	5.00	0.00	0.47			
139	P	558633.34	173940.71	12.00	212.00	5.00	0.00	0.47			
140	R	558486.83	173661.68	12.00	0.00	5.00	0.00	0.47			
141	R	558486.09	173622.41	12.00	0.00	5.00	0.00	0.47			
142	I	558565.69	173737.10	0.00	201.00	5.00	0.00	0.47			
[143gns for Lighting -		558571.08	173690.06	+4	0.00	962176.000	- 1	5.00	City E	0.00	ss (
144	I	558568.22	173659.46	0.00	167.00	5.00	0.00	0.47			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
145	Z	558409.34	173052.85	12.00	0.00	5.00	0.00	0.47			
146	Z	558448.24	172939.64	12.00	198.00	5.00	0.00	0.47			
147	I	558436.62	173232.98	12.00	350.00	5.00	0.00	0.47			
148	Q	558481.21	174613.21	10.00	124.00	5.00	0.00	2.22			
149	Q	558496.22	174632.02	10.00	178.00	5.00	0.00	2.22			
150	U	558572.21	172828.27	12.00	188.00	5.00	0.00	0.47			
151	U	558551.46	172839.42	12.00	14.00	5.00	0.00	0.47			
152	U	558606.06	172746.33	12.00	42.00	5.00	0.00	0.47			
153	T	558528.73	172756.02	8.00	144.00	5.00	0.00	0.72			

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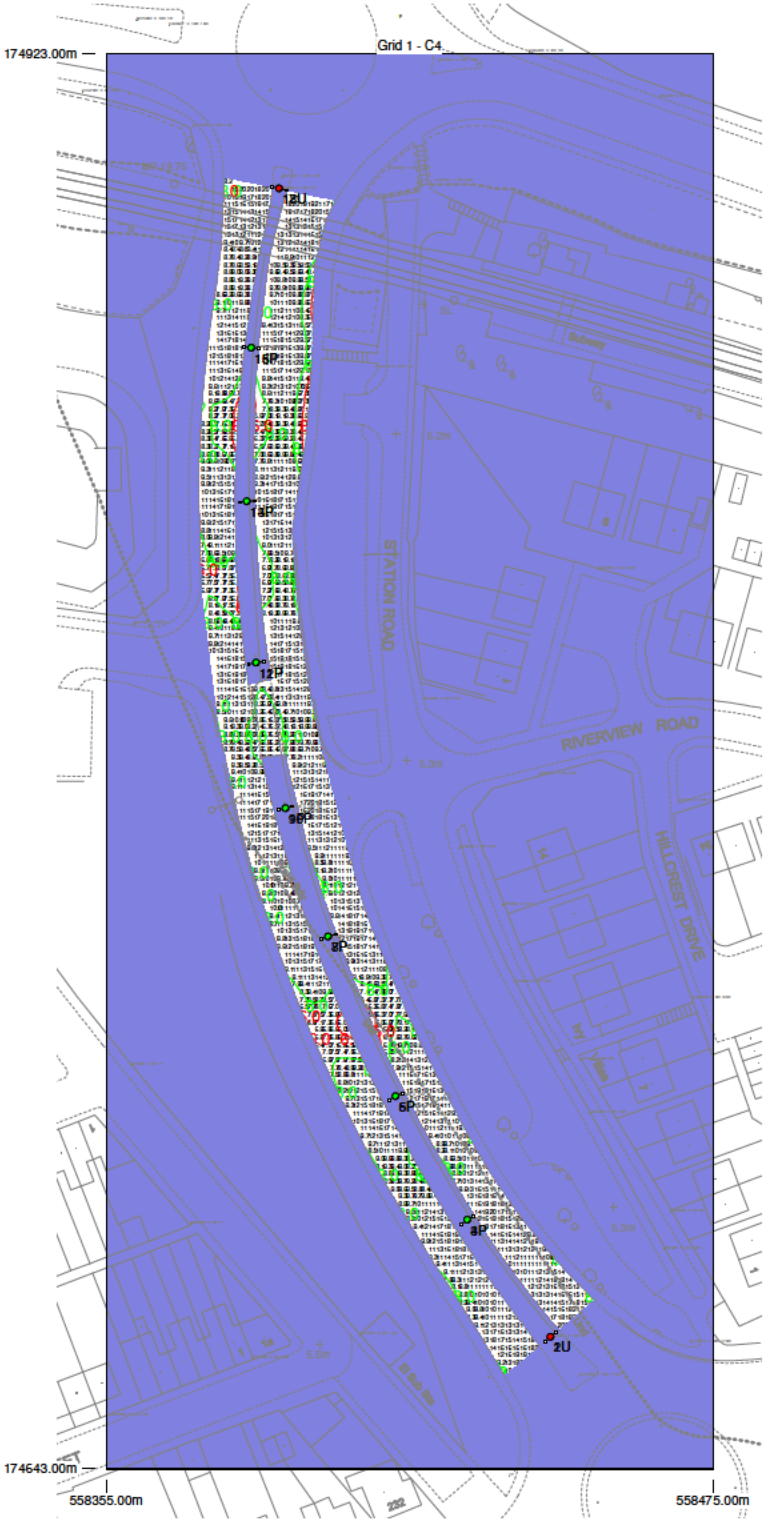
Horizontal Illuminance (lux)

Grid 1 - C4



Results

Eav	11.49
Emin	4.55
Emax	21.14
Emin/Emax	0.22

Horizontal Illuminance (lux)

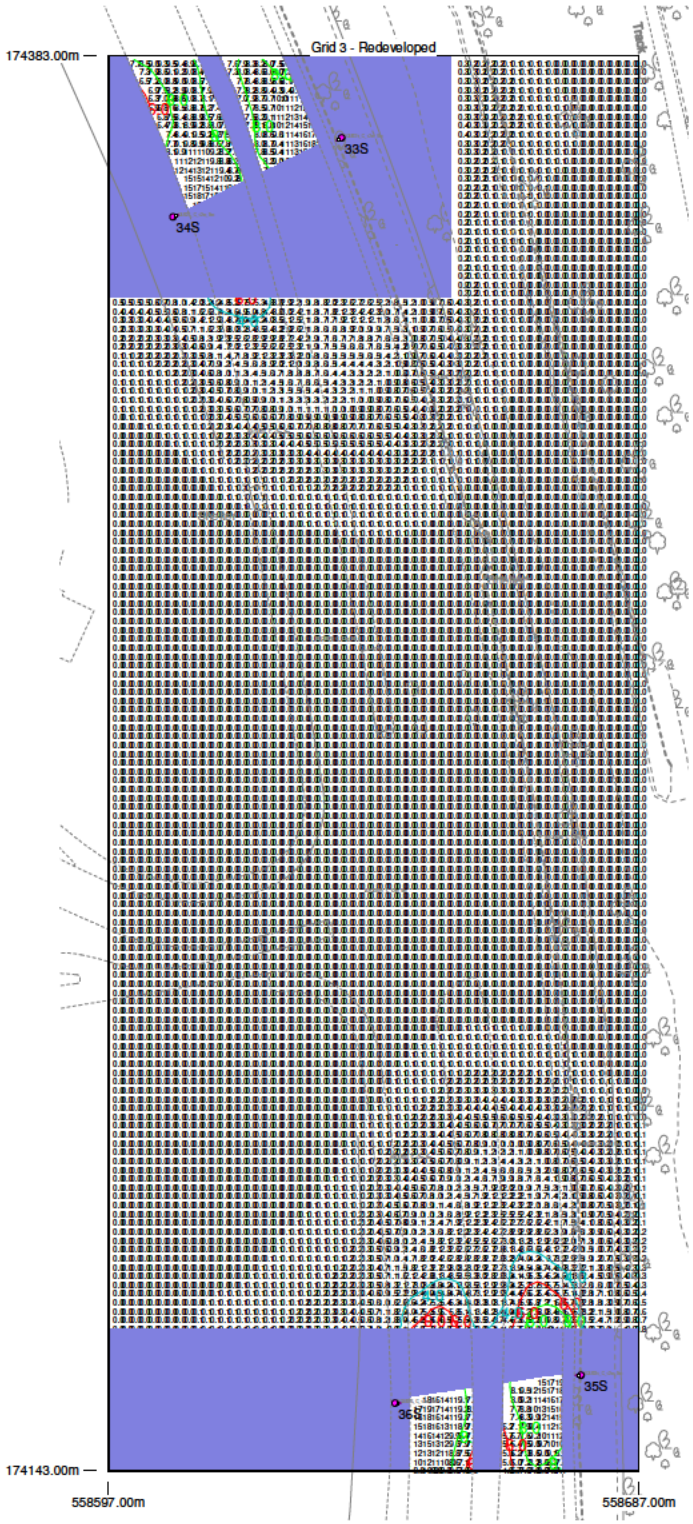
Grid 2 - C4

Results

Eav	11.11
Emin	3.80
Emax	21.54
Emin/Emax	0.18

Horizontal Illuminance (lux)

Grid 3 - Redeveloped

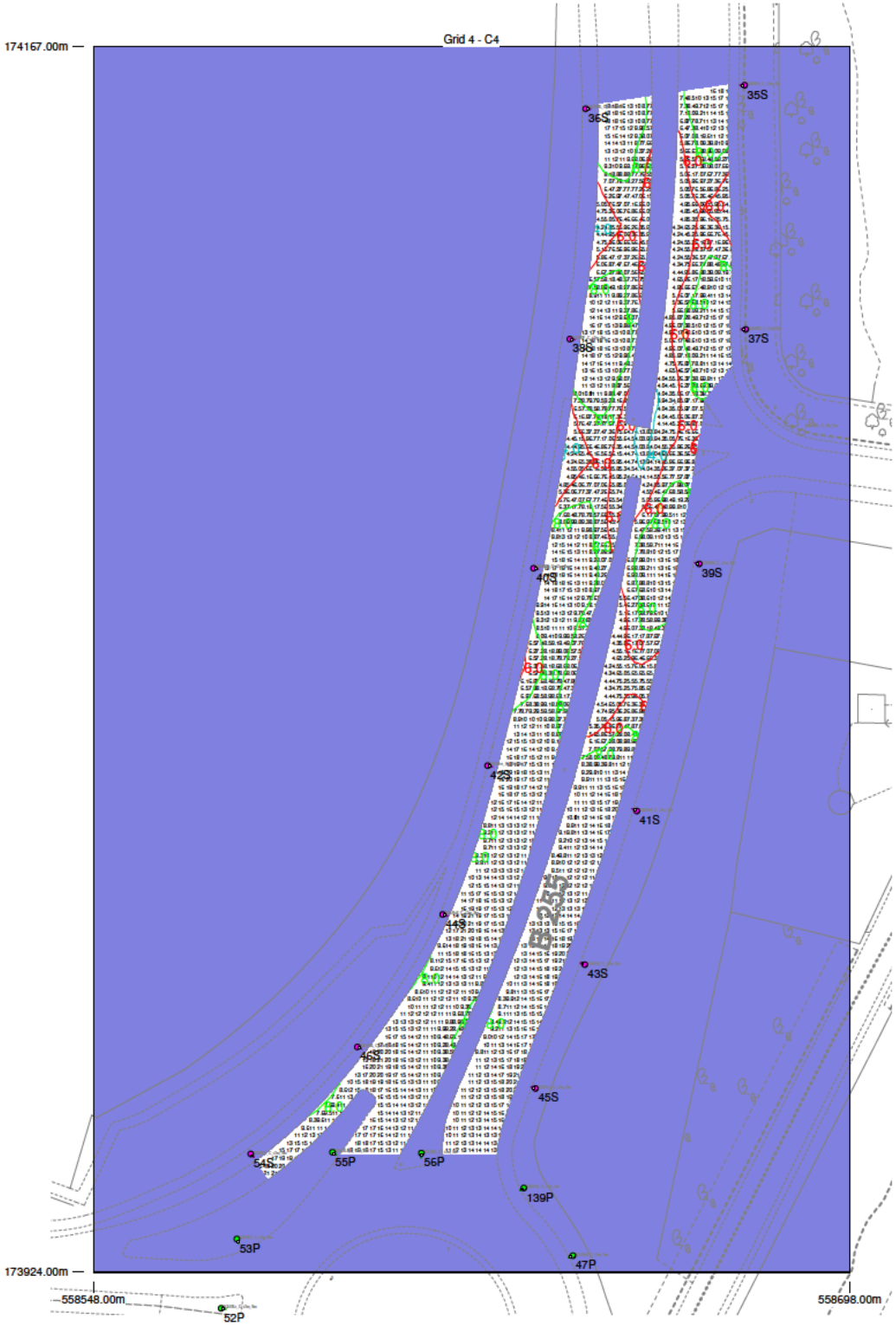


Results

Eav	0.73
Emin	0.00
Emax	18.75
Emin/Emax	0.00

Horizontal Illuminance (lux)

Grid 4 - C4

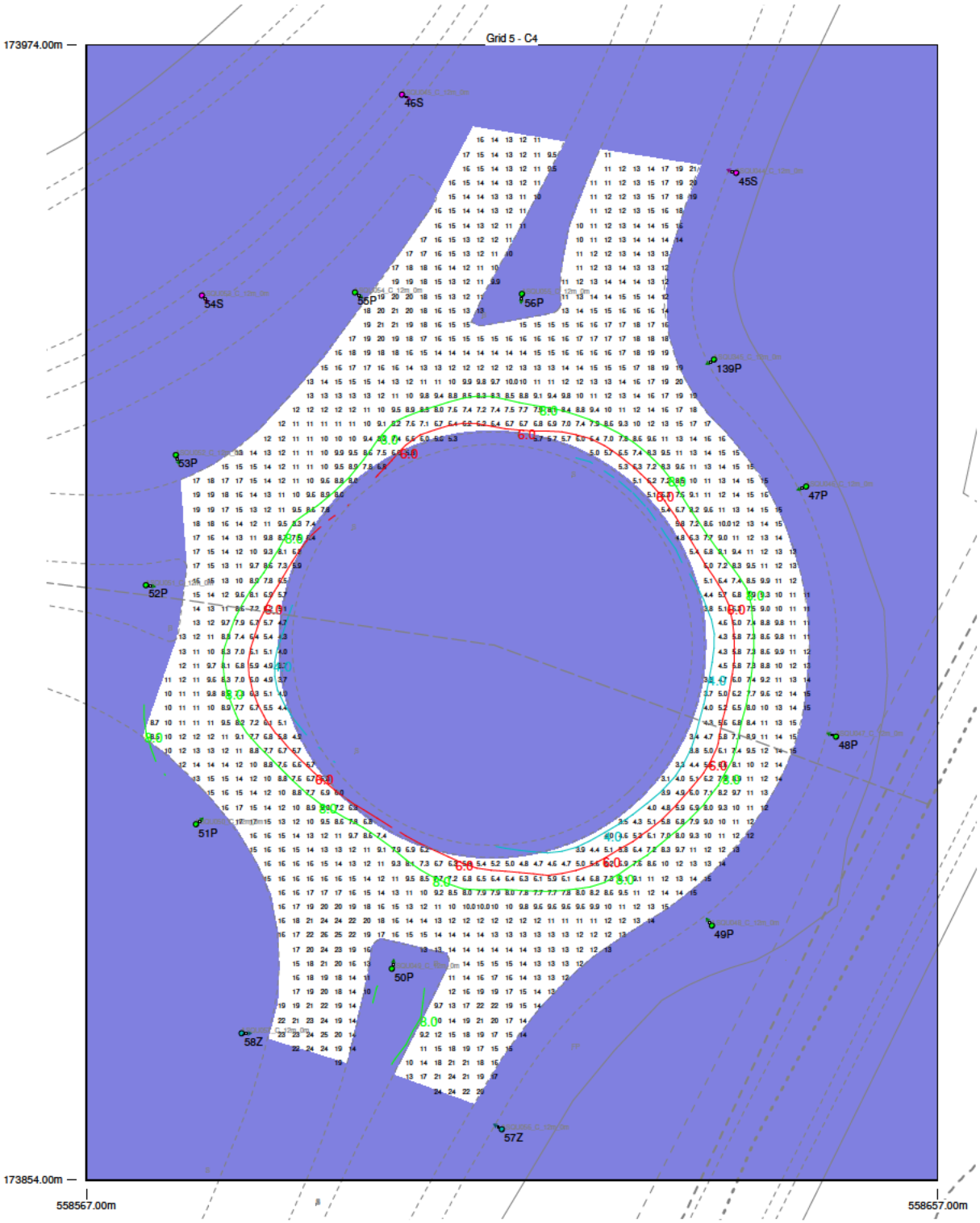


Results

Eav	10.45
Emin	3.81
Emax	21.40
Emin/Emax	0.18

Horizontal Illuminance (lux)

Grid 5 - C4

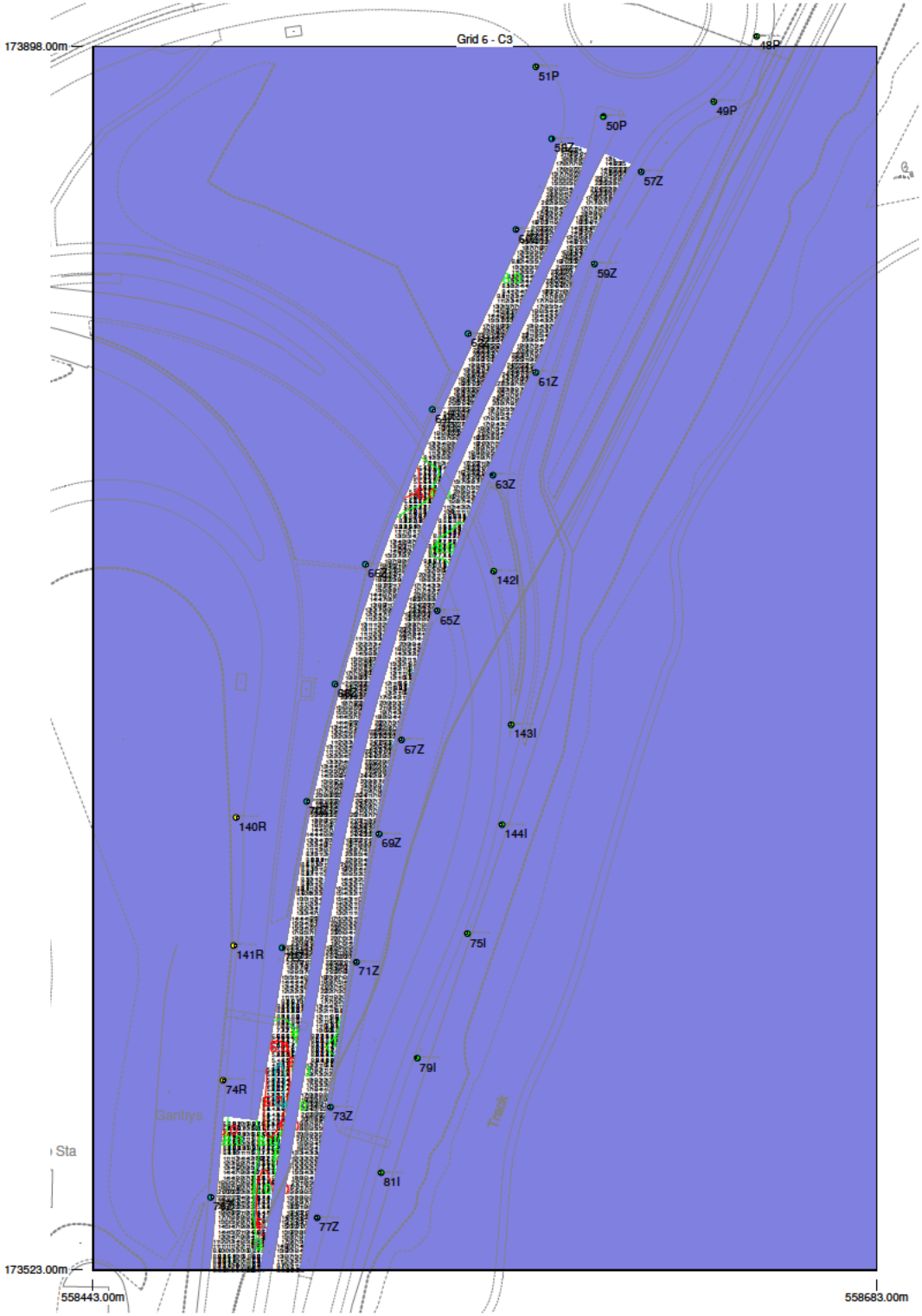


Results

Eav	12.08
Emin	3.06
Emax	25.90
Emin/Emax	0.12

Horizontal Illuminance (lux)

Grid 6 - C3

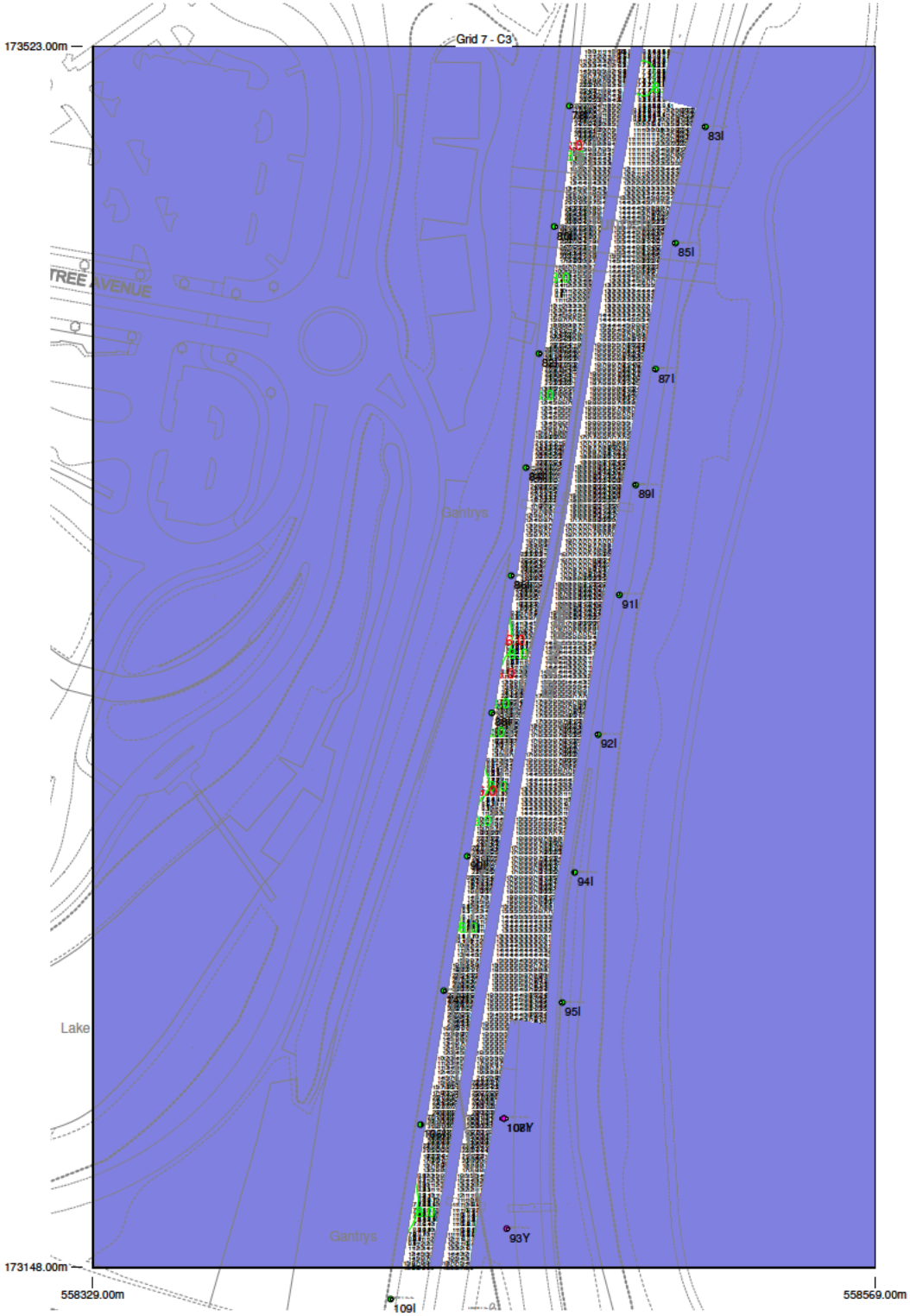


Results

Eav	15.26
Emin	3.36
Emax	30.24
Emin/Emax	0.11

Horizontal Illuminance (lux)

Grid 7 - C3



Results

Eav	17.22
Emin	5.81
Emax	35.72
Emin/Emax	0.16

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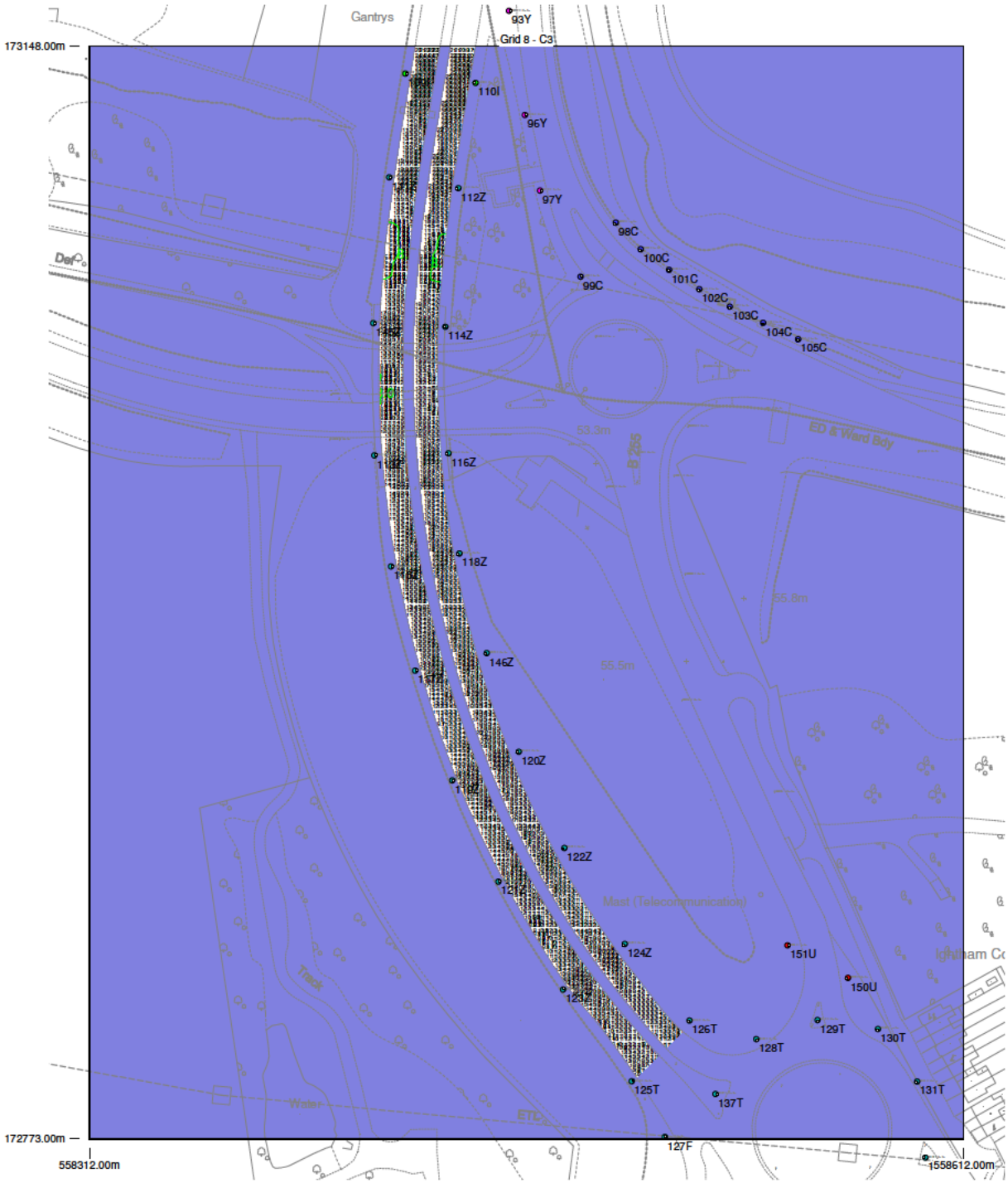
Horizontal Illuminance (lux)

Grid 8 - C3

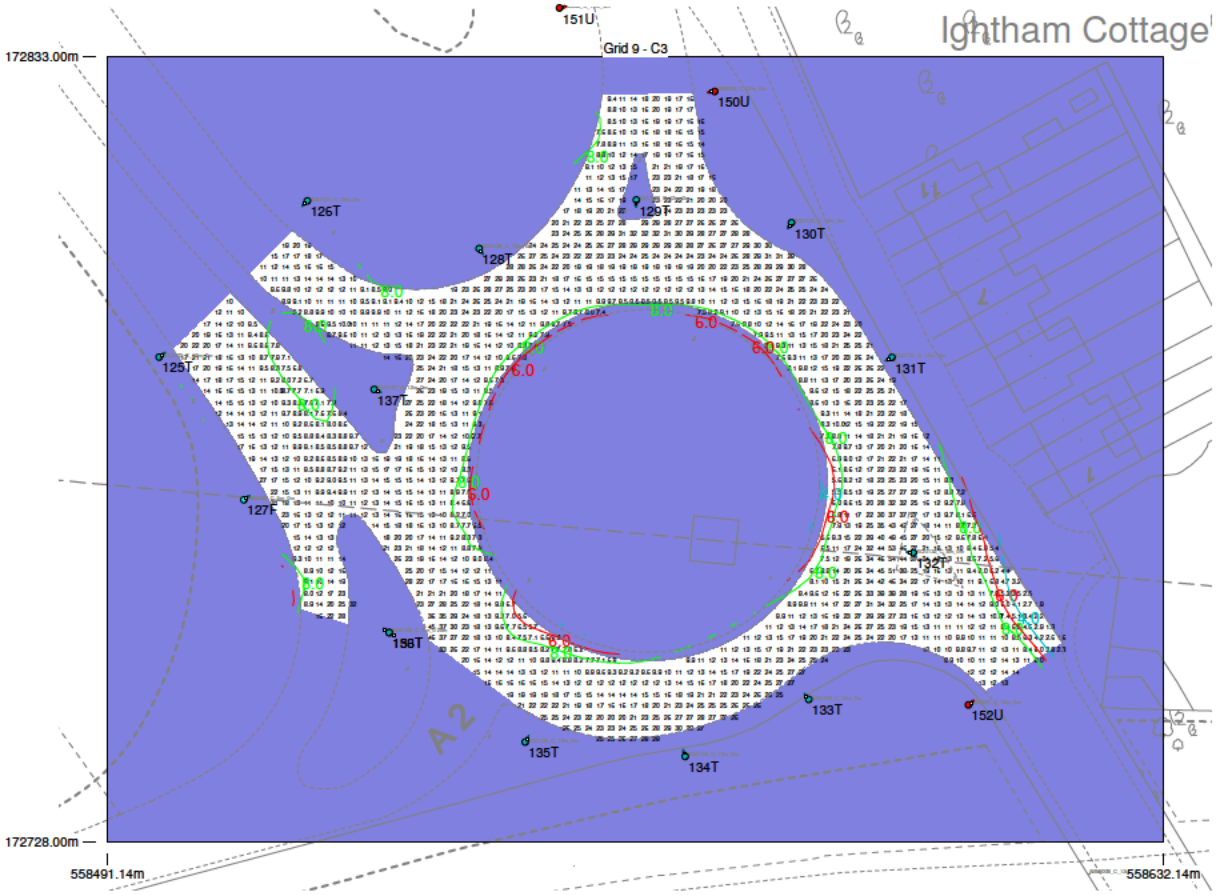


Results

Eav	16.33
Emin	6.49
Emax	32.80
Emin/Emax	0.20
Emin/Eav	0.40

Horizontal Illuminance (lux)

Grid 9 - C3



Results

Eav	16.50
Emin	1.63
Emax	54.49
Emin/Emax	0.03
Emin/Eav	0.10

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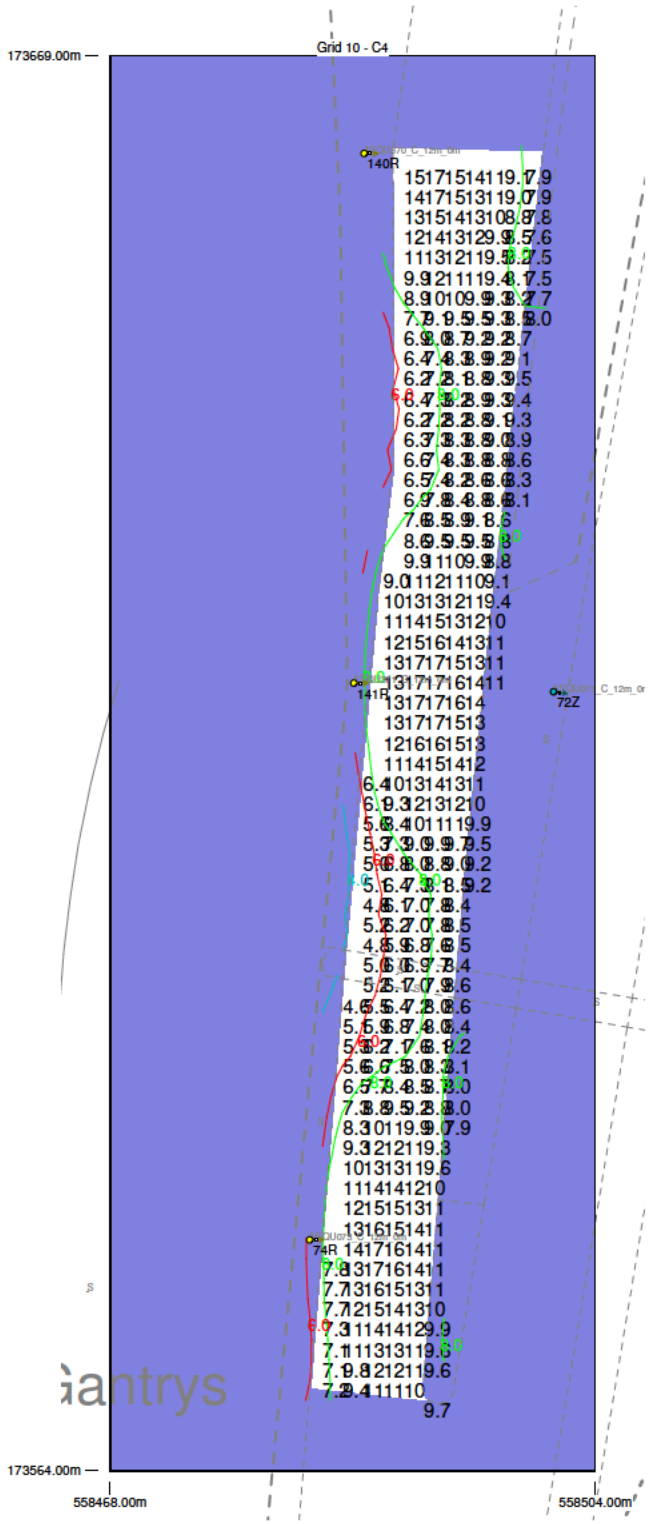
Horizontal Illuminance (lux)

Grid 10 - C4

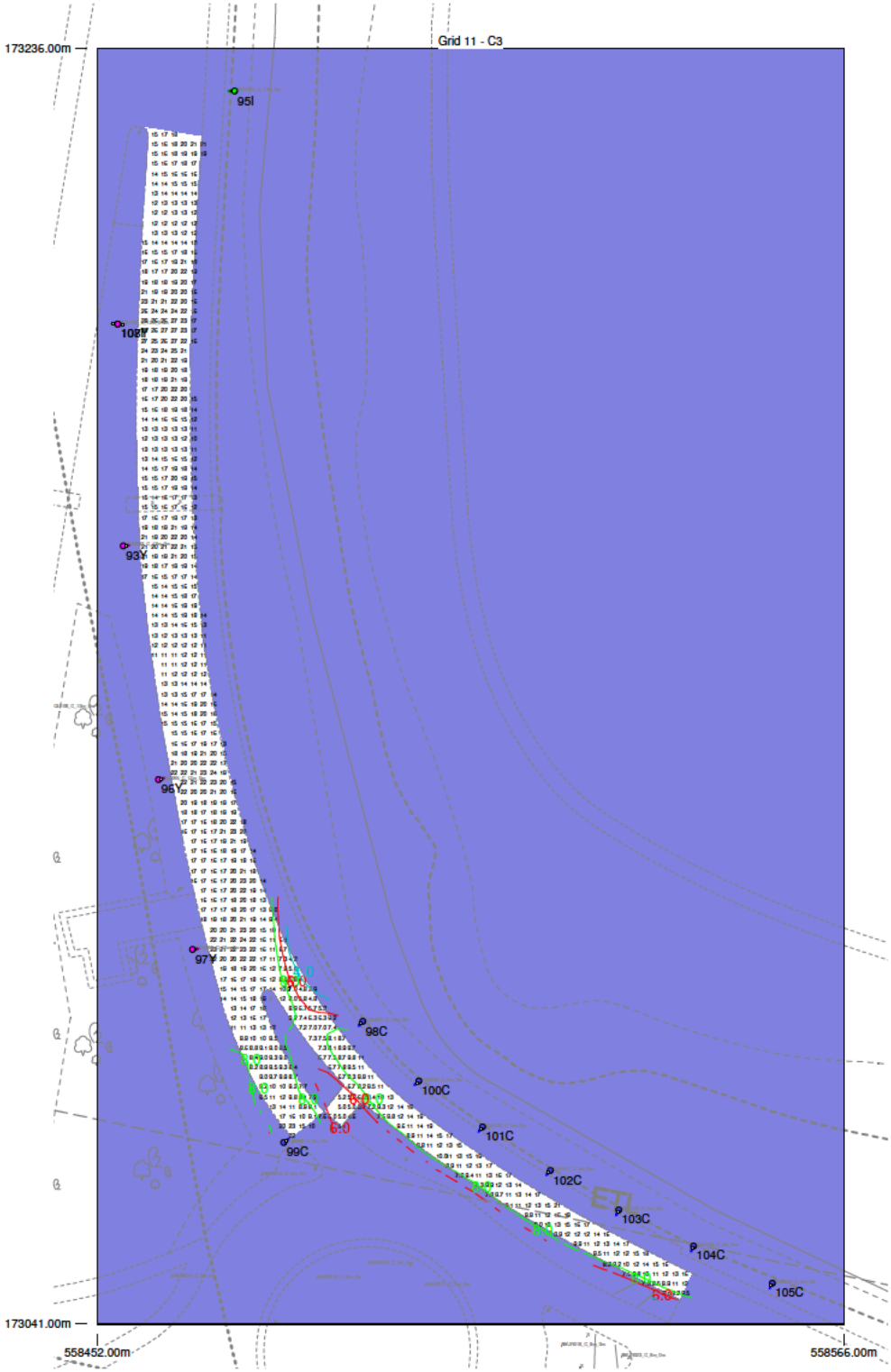


Results

Eav	10.14
Emin	4.64
Emax	17.29
Emin/Emax	0.27

Horizontal Illuminance (lux)

Grid 11 - C3

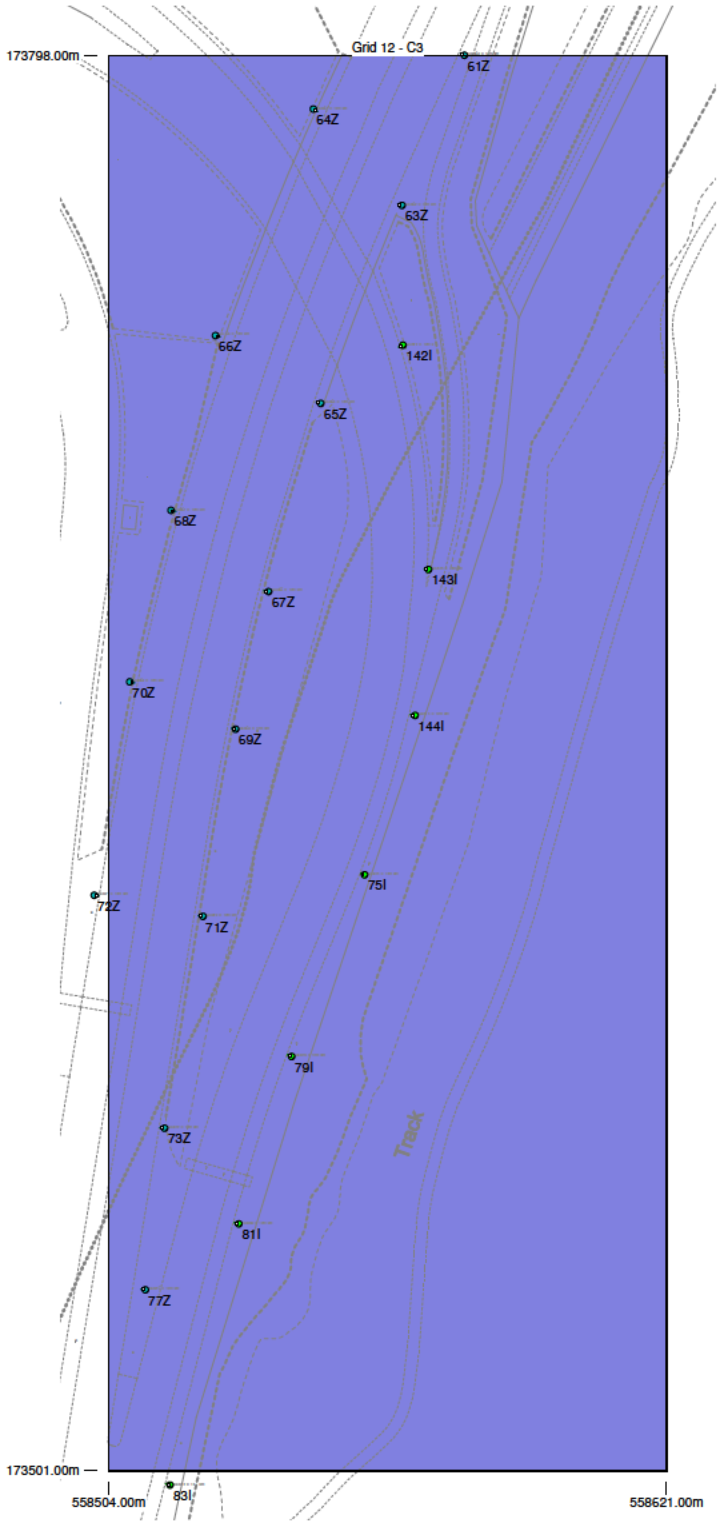


Results

Eav	15.06
Emin	3.89
Emax	32.31
Emin/Emax	0.12

Horizontal Illuminance (lux)

Grid 12 - C3



Results

Eav	0.00
Emin	0.00
Emax	0.00
Emin/Emax	0.00

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